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EXAMINER	
PINHEIRO, JASON PAUL	

ART UNIT	PAPER NUMBER
3714	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/781,868	BANDO, TARO	
	Examiner	Art Unit	
	Jason Pinheiro	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *24 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. After the amendment filed on 05/24/2007, claims 1-4, 6-9, 11-14, and 16-19 were amended, and claims 21-24 were newly added. As a result claims 1-24 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-7, 10-17, 20-22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Truchsess (US 5734726) in view of Matsuyama et al (US 6494784).

Regarding claims 1, 11, and 21: Truchsess discloses an operating section/input step (S1, Fig. 7; Col. 3, Lines 43-45) for inputting, in accordance with the player's operation, at least acceleration operation input data (Col. 1, Lines 63-65) for accelerating a movement of the object (toy vehicle; Col. 1, Line 59) and deceleration operation input data (Col. 1, Lines 63-65) for decelerating a movement of the object; an acceleration sound storage section (Segments 1-6 of memory 20, Fig. 1 and 4) in which a series of acceleration sound data of the object are stored (Col. 3, Lines 49-53), although Truchsess does not specifically disclose storing the series of acceleration sound data of the objects in continuous address spaces it would have been an obvious modification to the device of Truchsess to utilize sequential access memory due to its ability to provide higher

density memory at lower costs than random access memory. Truchsess further discloses a deceleration sound storage section (Segments 7-10 of memory 20, Fig. 1 and 4) in which a series of deceleration sound data of the object are stored (Col. 3, Lines 49-53), although Truchsess does not specifically disclose storing the series of deceleration sound data of the objects in continuous address spaces it would have been an obvious modification to the device of Truchsess to utilize sequential access memory due to its ability to provide higher density memory at lower costs than random access memory. Truchsess further discloses a read start address section (Col. 4, Lines 1-8) for selecting, based on operation input data input via the operating section, either one of the acceleration sound data and the deceleration sound data which are stored in the acceleration sound storage section and the deceleration sound storage section, respectively, and for calculating a read start address of selected sound data in accordance with a current moving speed of the object in the game space (when decelerating from maximum speed the jump vector directs the microcontroller to an address in memory, which is based on the fact that the car is at maximum speed) (Col. 4, Lines 1-27); a sound data reading section (22, Fig. 4-6) for sequentially reading, selected sound data from the read start address calculated by the read start address calculating section (Col. 3, Lines 53-55); and a sound output control section (28, Fig.4-7) for outputting, as a sound, the sound data read by the sound data reading section (Col. 3, Line 58).

Truchsess further discloses recording sounds of a tangible object moving from a velocity A to a velocity B over a period of time (Fig. 1), and storing the sounds as data on a recoding medium (Col. 3, Line 40 – Col. 4, Line 27); dividing the data into segments designated by a plurality of states where a first state corresponds to velocity A and a second segment corresponds to velocity B (Col. 3, Line 40 – Col. 4, Line 8); Reading the data associated with the current velocity (data associated with the maximum velocity) (Col. 4, Lines 1-27); converting the data associated with the current velocity to a sound and outputting the sound (Col. 3, Line 58 – Col. 4, Line 27) (outputting the sound associated with the maximum velocity at maximum velocity).

However, Truchsess does not disclose a moving speed calculating section for, based on the acceleration operation input data and the deceleration operation input data input via the operating section calculation a moving speed of the object in a game space.

Matsuyama '784 does disclose a moving speed calculating section for, based on the acceleration operation input data and the deceleration operation input data input via the operating section calculation a moving speed of the object in a game space (Col. 2, Line 43 – Col. 3, Line 4).

Therefore it would have been obvious to one skilled in the art at the time the invention was made to use the speed calculating of Matsuyama in the device of Truchsess. Using the known technique of calculating a speed in a gaming device would provide accuracy desired in Truchsess to more accurately

determine the speed at which the vehicle is at (i.e. maximum speed) and therefore more accurately determine which sound segment to point to in memory.

Regarding claims 2 and 12: Truchsess and Matsuyama disclose that which is disclosed above. Truchsess further discloses that the read address calculating section changes a calculation target at the read start address from one to the other between the acceleration sound data and the deceleration sound data, while the sound data read section sequentially reads, in response to a change of the calculation target of the read address calculating section, sound data newly targeted for calculation from the read start address, thereby continuously reading different types of sound data before and after the change of the calculation target (Col. 4, Lines 1-26).

Regarding claims 3 and 13: Truchsess and Matsuyama disclose that which is disclosed above. Truchsess further discloses that when the sound data reading section is sequentially reading the acceleration sound data in response to the acceleration operation input data from the operating section, if there is an input of the deceleration operation input data from the operating section, the read start address calculating section calculates the read start address of the deceleration sound data based on the moving speed (when accelerating from minimum speed the jump vector directs the microcontroller to an address in memory, which is based on the fact that the car is at minimum speed) (Col. 4, Lines 1-27) corresponding to a read address (jump vector, Fig. 3) of the

acceleration sound data being read by the sound data reading section (as shown in Fig. 3) (Col. 4, Lines 1-26).

Regarding claims 4 and 14 Truchsess and Matsuyama disclose that which is disclosed above. Truchsess further discloses when the sound data reading section is sequentially reading the deceleration sound data in response to the deceleration operation input data from the operating section, if there is an input of the acceleration operation input data from the operating section, the read address calculating section calculates the read start address of the acceleration sound data based on the moving speed (when decelerating from maximum speed the jump vector directs the microcontroller to an address in memory, which is based on the fact that the car is at maximum speed) (Col. 4, Lines 1-27) corresponding to a read address (jump vector, Fig. 3) of the deceleration sound data being read by the sound data reading section (as shown in Fig. 3) (Col. 4, Lines 1-26).

Regarding claims 5 and 15: Truchsess and Matsuyama disclose that which is disclosed above. Truchsess further discloses that the acceleration sound data stored in the acceleration sound storage section contains at least sound data corresponding to an acceleration range where the object accelerates from a minimum speed to a maximum speed at a constant acceleration rate (as shown in Fig. 1) (Col. 4, Lines 11-16); and the deceleration sound data stored in the deceleration sound storage section contains at least sound data corresponding to a deceleration range where the object decelerates from the

maximum speed to the minimum speed at a constant deceleration rate (as shown in Fig. 1) (Col. 4, Lines 16-20).

Regarding claims 6, 16, and 24: Truchsess and Matsuyama disclose that which is disclosed above. Truchsess further discloses that the acceleration sound data stored in the acceleration sound storage section further contains sound data corresponding to a maximum and constant speed range, where the object moves at the maximum and constant speed, and the sound data corresponding to a maximum and constant speed range is sequential in address to the sound data corresponding to the acceleration range (as shown in Fig. 1) (Col. 4, Lines 11-16); and the sound data reading section repeatedly reads the acceleration sound data corresponding to the maximum and constant speed range if the acceleration operation input data is continuously input from the operating section for a period of a prescribed time (the time the acceleration input must be pressed to reach maximum speed) or more (until the acceleration input is released) (as shown in Fig. 1) (Col. 4, Lines 9-16).

Regarding claims 7 and 17: Truchsess and Matsuyama disclose that which is disclosed above. Truchsess further discloses that the deceleration sound data stored in the deceleration sound storage section further contains sound data corresponding to a minimum and constant speed range, where the object moves at the minimum and constant speed, and the sound data corresponding to a minimum and constant speed range is sequential in address to the sound data corresponding to the deceleration range (as shown in Fig.1)

(Col. 4, Lines 16-20); and the sound data reading section repeatedly reads the deceleration sound data corresponding to the minimum and constant speed range if the deceleration operation input data is continuously input from the operating section for a period of a prescribed time (the time the deceleration input must be pressed to reach minimum speed) or more (until the acceleration input is pressed) (as shown in Fig. 1) (Col. 4, Lines 9-16).

Regarding claims 10 and 20: Truchsess and Matsuyama disclose that which is disclosed above. Truchsess further discloses that the object is a vehicle (Col. 1, Line 59); and the action parameter corresponds to a speed of the vehicle (Col. 4, Line 13-14).

Regarding claim 22: Truchsess and Matsuyama disclose that which is disclosed above. Truchsess further discloses that velocity A equals velocity B (the vehicle goes from minimum speed (velocity A) to a maximum speed (velocity A') back to minimum speed (velocity B).

4. Claims 8-9, 18-19, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Truchsess (US 5734726) in view of Matsuyama et al (US 6494784). as applied to claims 1, 11 & 21 above, and further in view of Klayman (US 5,784,468).

Regarding Claims 8-9, 18-19, and 23: Truchsess discloses that which is discussed above. Truchsess further discloses that the operating section is able to input acceleration and deceleration operation input data for accelerating and decelerating the movement of the object at an arbitrary rate of speed in accordance with a degree of operation designated by the player (Col. 3, Lines

43-52). However, Truchsess does not disclose that the sound output control section includes an acceleration and deceleration sound frequency correcting section.

Klayman teaches processing sound signals by applying frequency correction (Col. 12, Lines 22-33; Col. 15, Lines 23-30).

Therefore, in view of Klayman, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined device and method of Truchsess and Matsuyama to include applying frequency correction to the acceleration and deceleration data in order to acoustically enhance the output from the speakers that results in an even greater enhancement of spatial sound stage.

Response to Arguments

5. Applicant's arguments, see Remarks/Arguments, filed May 24, 2007, with respect to the rejection(s) of claim(s) 1-20 under 35 U.S.C. 102 (b) and 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of a different interpretation of the previously applied reference along with newly found prior art reference(s) as explained in the rejections above.

6. Applicant's arguments, see Remarks/Arguments, filed May 24, 2007, with respect to the rejection(s) of claim(s) 11-20 under 35 U.S.C. 101 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Pinheiro whose telephone number is 571-270-1350. The examiner can normally be reached on M - F 8:00 AM - 4 PM;.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP
08/16/2007

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